

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/38950

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(7) : C12Q 1/68; C12N 15/63 US CL : 435/6, 455 According to International Patent Classification (IPC) or to both national classification and IPC																				
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) U.S. : 435/6, 455  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST, CAPlus, Medline, Embase, Biosis																				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>																				
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																		
X	Mansell, A. et al. "The serine protease inhibitor antithrombin III inhibits LPS-mediated NF-kappaB activation by TLR-4", November 2001, FEBS letters, Vol. 508: pp.313-317.	1																		
X	Yoshimura, A. et al. "Lipopolysaccharides from Periodontopathic Bacteria Porphyromonas gingivalis and Capnocytophaga achracea Are Antagonists for Human Toll-Like Receptor 4", Jan. 2002, Vol. 70: pp. 218-225.	1.																		
X, P	Ohta, S. "Identification of a novel isoform of MD-2 that downregulates lipopolysaccharide signaling", November 2004, Biochem. Biophys. Res. Comm., Vol. 323: pp.1103-1108.	1, 4, 5-6.																		
X	Su, B. et al., "Helicobacter pylori Activates Toll-Like Receptor 4 Expression in Gastrointestinal Epithelial Cells", June 2003, Infect. Immun., Vol. 71: pp. 3496-3502.	1, 8.																		
X	Hatakeyama, J. "Contrasting responses of human gingival and periodontal ligament fibroblasts to bacterial cell-surface components through the CD14/Toll-like receptor system", Feb. 2003, Oral Micro. Immun., Vol. 18: pp. 14-23.	1, 8.																		
X	WO 03/035110 A1 (Arditi et al) 1 May 2003 (1.05.2003), pages 5-8.	1-6, 8.																		
X,P	WO 2004/093778 (Cohen et al) 4 November 2004 (04.11.2004), see entire document, especially pages 4-9.	1-4																		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.																				
<table border="0"><tr><td>• Special categories of cited documents:</td><td>"T"</td><td>later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td></tr><tr><td>"A" document defining the general state of the art which is not considered to be of particular relevance</td><td>"X"</td><td>document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td></tr><tr><td>"E" earlier application or patent published on or after the international filing date</td><td>"Y"</td><td>document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td></tr><tr><td>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td><td>"&amp;"</td><td>document member of the same patent family</td></tr><tr><td>"O" document referring to an oral disclosure, use, exhibition or other means</td><td></td><td></td></tr><tr><td>"P" document published prior to the international filing date but later than the priority date claimed</td><td></td><td></td></tr></table>			• Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"E" earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family	"O" document referring to an oral disclosure, use, exhibition or other means			"P" document published prior to the international filing date but later than the priority date claimed		
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"P" document published prior to the international filing date but later than the priority date claimed																				
Date of the actual completion of the international search 19 March 2005 (19.03.2005)		Date of mailing of the international search report 01 APR 2005																		
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230		Authorized officer Michael D. Burkhardt Telephone No. (571) 272-2915																		

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## C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,740,487 B1 (Schwartz et al) 25 May 2004 (25.05.2004)	1-17